

sample to other samples and controls or standards, for each type of food product, a uniform sample size should be used and the sample should be measured in, at least, approximately the same conditions, such as the same step in the manufacturing process, and the same temperature and concentration.

REMARKS

At the time of the first Official Office Action following the filing of the Request for Continued Examination (RCE) in the above captioned application, claims 1-10 and 12-20 were present in the application. Of those claims, claims 1 and 10 were independent claims directed to the apparatus and claim 12 was an independent claim directed to the process for the measurement of fruit particles in a matrix.

In that Office Action all of the claims were rejected as follows:

1. Claims 1, 3-6 and 12 were rejected as obvious under 35 U.S.C. §103(a) over QUEISSER et al. (5,818,953) in view of the background of the application as stated at page 2, lines 3-14 of the present application;
2. Claims 2, 7-10, 13, 14, 17 and 18 were rejected under 35 U.S.C. §103(a) over QUEISSER et al. in view of the stated background, and further in view of BOLLE et al. (5,546,475);
3. Claims 15 and 19 were rejected as obvious under 35 U.S.C. §103(a) over QUEISSER et al. in view of the stated background, and further in view of SISTLER et al. (4,975,863);

4. Claims 16 and 20 were rejected as obvious under 35 U.S.C. §103(a) over QUEISSEER et al., the stated background, SISTLER et al. and BOLLE et al.; and
5. Claims 1-20¹ were rejected under 35 U.S.C. §103(a) as obvious over HECK et al. (5,845,002) in view of the stated background and SISTLER et al.

Applicants wish to thank Examiner Dastouri for the interview with applicants' undersigned counsel at the Patent and Trademark Office on February 20, 2002.

As set forth during the interview, the present invention is directed to the discovery by applicants that conventional, camera computer imaging which was previously employed in the quality inspection of other products, such as contact lenses, semiconductor wafers, electronics and pharmaceuticals, may be employed in the measurement of fruit particles in a starch and/or sugar matrix. Prior to applicants' discovery, the fruit particles in the matrix were washed on a screen to remove the matrix so that the fruit retained on the screen could be accurately weighed and analyzed. However, applicants have discovered that camera computer imaging may be employed on such fruit particles without the need to remove the matrix. To applicants' knowledge camera computer imaging had never been used in this manner before applicants' discovery.

All of the claims presently in the application expressly spell out that the fruit particles are not removed from the matrix during analysis, but remain in the matrix which is "selected from the group consisting of a sugar matrix, a starch matrix or a sugar and

¹Claim 11 was long ago canceled and was not present in the application at the time of the last Official Office Action.

starch matrix", and that such matrix is the kind "used in fruit fillings, toppings, dairy products or cooked food products".

Neither of the primary prior art patent references which have been relied upon in the rejection of the claims, i.e. QUEISSER et al. or HECK et al., disclose the camera computer imaging of fruit particles, and even more significantly of fruit particles within a sugar and/or starch matrix of the type claimed.

QUEISSER et al. discloses nothing more than camera computer imaging of french fries which are methodically and symmetrically lined up in a tray during the imaging. QUEISSER et al. contains no disclosure or suggestion whatsoever of the analysis of fruit or that such fruit is in a starch and/or sugar matrix as claimed.

HECK et al. discloses camera computer imaging of whole single items of citrus fruit by measuring the fruit skins. HECK et al. contains no disclosure or suggestion of the analysis of food particles or of any food product which is in a matrix, much less the sugar and/or starch matrix of the claimed invention.

Indeed, it is admitted in the last Office Action that such failure of disclosure or suggestion exists in the two primary patents relied upon in the rejection. However, to overcome these critical failures, page 2, first full paragraph of applicants' own specification, is relied upon as an "admission" that computer imaging was believed by the prior art to have many advantages for the measurement of fruit particles in a matrix and that the prior art proposed that such systems could be used for fresh fruit, frozen fruit and cooked food pieces containing food products. Given this alleged "admission", the position is then taken that it would have been obvious to utilize the imaging procedures of either of the primary patents to analyze the food particles in a matrix as claimed by applicants.

Applicants respectfully submit that it is crystal clear that it was not the prior art that had these beliefs or proposals as stated at page 2, but that it was in fact the present inventors who had these beliefs and proposals. In fact, the paragraph on page 2 of the application contains no disclosure or suggestion which would permit the modification of QUEISSER et al. or HECK et al. in the manner in which those items of prior art have been modified in order to meet applicants' invention.

During the interview the Examiner continued to insist that the statements as they appear at page 2 can only be interpreted to be beliefs and proposals of the prior art. The only basis for this is simply because the statements are contained within a section entitled "Background of the Invention".

It is respectfully submitted that this position is clear error and must be withdrawn at least for the following reasons.

1. The statements which have been relied upon to constitute admissions are in fact ambiguous. They do not expressly state one way or the other who the believers or proposers were. All they state is:

Computer imaging is believed to have many advantages for use in the measurement of fruit particles in a matrix....It is proposed that such systems could be used for fresh fruit, frozen fruit and cooked fruit pieces containing food products.

Thus, it is not clear one way or the other when viewing the statements themselves who the believers or proposers are. However, it is clear when considering the remainder of the application and the circumstances surrounding the invention that the believers and proposers in fact are the present inventors and not the prior art.

2. For example, it is clear that everything is not and was not intended to simply be a statement of prior art just because it happens to be contained under the title "Background of the Invention". Immediately following the quoted statements which have been relied up to reject the claims, three objects of the invention are expressly stated. Those are certainly not objects of the prior art. They are clearly objects of the present invention by applicants.
3. And significantly, the next titled subject matter appearing in the application after these three stated objects of the invention is a section titled "Summary of the Invention" where it is expressly stated that in the invention

Fruit pieces or a food product containing fruit pieces, for example, a filling with fruit pieces in a matrix of sugar and/or starch, is spread on a sample tray and placed above the translucent screen of a light box.

This unqualified definitive statement provides clear support for the conclusion that the belief that computer imaging has advantages in the measurement of fruit particles in a matrix is that of the present inventors and not the prior art.

4. If the interpretation of page 2 of the application would be as urged in order to reject the claims, it is inconceivable why applicants would have gone through the trouble of preparing and filing an application. Why would they file an application on something which they admit to be old?

5. Finally, in an earlier submitted Declaration under Rule 131 by the two applicants, they filed exhibits which were prepared during the development of the invention and prior to the April 17, 1996 filing date of QUEISSER et al. That date is well before the filing date of the present application and the statements in question on page 2. A copy of Exhibit B to that declaration is attached hereto. Exhibit B was authored by one of the inventors of the present application during the development of the invention and reveals that much of the content which appears in the present application under the title "Background of the Invention" finds its origin in Exhibit B. Significantly, and expressly contrary to the interpretation of the paragraph on page 2 of the specification as urged by the Examiner, the last paragraph of Exhibit B clearly confirms the fact that the believers and proposers in the statement on page 2 were not the prior art, but were the present inventors. It states:

The use of computer imaging has not previously been used for the measurement of fruit particles in a matrix. Tests have been completed at one imaging vendor to determine the variability of the proposed analysis, the ability to view a wide variety of fruit products and evaluate the effectiveness of the software to produce meaningful fruit identity measurements. These test results are being analyzed. It is expected that application of this technology, if tests are successful, will be possible before _____. The outcome will be a much improved fruit identity test which will be of benefit to Yoplait in characterizing the product and will also be a useful tool in examining fruit processing to determine means of improvement. (emphasis supplied)

For the foregoing reasons, it is respectfully submitted that the statements in the specification page 2 which have been relied on as an "admission" that the prior art previously measured fruit particles in a matrix with camera computer imaging is inconsistent, improper and error and must be withdrawn. When it is withdrawn, there is no prior art of record which can fulfill the role which the statements were relied upon for in the attempt to reject the claims. Thus, even when all of the prior art of record is combined in the absence of the statements in question, the resulting combination does not result in any disclosure or suggestion whatsoever of the present invention in which the discovery has been made that camera computer imaging of fruit particles in a matrix may be made.

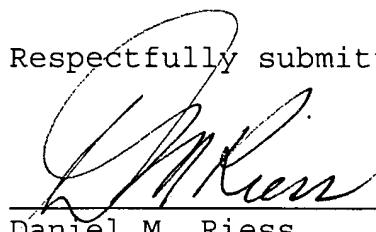
The Examiner also took the position during the interview that applicants have not further pursued and have dropped their Declarations Under Rule 131 swearing back of QUEISSER et al. Applicants here state for the record that they have not abandoned their Declaration Under Rule 131 and Supplemental Declaration under Rule 131, and respectfully submit that the declarations of record in the prosecution of this application do constitute a clear showing and proofs of reduction to practice prior to the filing date of QUEISSER et al. for the reasons stated previously of record by applicants, for example in the Amendment filed May 23, 2000, the Response under Rule 116 filed November 21, 2000 and the Communication Prior to First Office Action in CPA filed February 13, 2001.

For the above reasons, it is respectfully submitted that all of the claims, claims 1-10 and 12-20, are in condition for

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allowance. Accordingly, favorable reconsideration and allowance are requested.

Respectfully submitted,


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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

On page 2, amend the second full paragraph to read as follows:

A sample consisting of fruit particles or fruit particles in a matrix is spread evenly inside the sample tray [26] 36 with a spatula or, if the sample is not very viscous, by gently shaking the tray with a circular motion. The sample size should be chosen so that a uniform thin layer covering the bottom of the sample tray 36 may be formed and so that it is possible to adjust the lights so that the fruit particles in the sample appear as darker areas against a lighter background. In order to fairly and accurately compare one sample to other samples and controls or standards, for each type of food product, a uniform sample size should be used and the sample should be measured in, at least, approximately the same conditions, such as the same step in the manufacturing process, and the same temperature and concentration.